

Appl. No.: 10/767,181
Art Unit: Not yet assigned; Docket No.: B04-01

LISTING OF CLAIMS

1-22. (Cancelled)

23. (New) A golf ball comprising:

a center having a compression of less than about 75 and a diameter between about 1.55 inches and about 1.60 inches; and

at least one cover layer surrounding the center, the cover layer being formed of an ionomer component and a metallocene polymer component, having a Shore D hardness on the ball of less than about 58, and having a water vapor transmission rate of less than about 12.62 g/100 in²-day.

24. (New) The golf ball of claim 23, wherein the center has a compression of between about 63 and about 73.

25. (New) The golf ball of claim 23, wherein the cover layer has a Shore D hardness on the ball of less than about 55.

26. (New) The golf ball of claim 24, wherein the cover layer has a Shore D hardness on the ball of between about 50 and about 52.

27. (New) The golf ball of claim 23, wherein the cover layer includes about 50% to about 70% of the ionomer component and about 50% to about 30% of the metallocene polymer component.

28. (New) The golf ball of claim 23, wherein the cover layer includes about 60% of the ionomer component and about 40% of the metallocene polymer component.

29. (New) The golf ball of claim 23, wherein the ionomer component is a single ionomer.

30. (New) The golf ball of claim 23, wherein the ionomer component includes the ionomer selected from the group including: a sodium ionomer, a magnesium ionomer, a zinc ionomer, and a lithium ionomer.

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31. (New) The golf ball of claim 30, wherein the ionomer component includes at least two different ionomers.
32. (New) The golf ball of claim 30, wherein the ionomer component includes at least three different ionomers.
33. (New) The golf ball of claim 23, wherein the center includes less than about 30 pph zinc diacrylate and omits pentachlorothiophenol and salts thereof.
34. (New) The golf ball of claim 23, wherein the center includes greater than about 30 pph zinc diacrylate and pentachlorothiophenol or a salt thereof.
35. (New) The golf ball of claim 23, wherein the compression of the golf ball is greater than about 70.
36. (New) A golf ball having a compression of about 70 to about 80, comprising:
a center having a compression of about 63 to about 75; and
at least one cover layer surrounding the center, the cover layer being formed of at least one ionomer and at least one metallocene polymer, having a Shore D hardness on the ball of less than about 58, and having a water vapor transmission rate of less than 12.62 g/100 in²-day.
37. (New) The golf ball of claim 36, wherein the compression of the golf ball is between about 74 and about 80.
38. (New) The golf ball of claim 36, wherein the center includes polybutadiene, zinc diacrylate, a free radical initiator, zinc oxide, and a filler.
39. (New) The golf ball of claim 38, wherein the polybutadiene has a Mooney viscosity between about 40 and about 60.

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40. (New) The golf ball of claim 38, wherein the polybutadiene is a blend of a first and second polybutadiene, the first polybutadiene having a Mooney viscosity between about 30 and about 50 and the second polybutadiene having a Mooney viscosity between 50 and about 70.
41. (New) The golf ball of claim 38, wherein the filler is selected from the group consisting of: metal powder, metal alloy powder, metal oxide, metal stearates, particulate carbonaceous materials, tungsten, barium sulfate, iron, manganese, magnesium, copper, and tungsten trioxide.
42. (New) A two-piece golf ball having a compression of about 70 to about 80, comprising:
a center having a compression of less than about 75 and a diameter between 1.55 inches and about 1.60 inches; and
a single cover layer surrounding the center, the cover layer being formed of a lithium ionomer and a metallocene polymer, having a Shore D hardness on the ball of less than about 58, and having a water vapor transmission rate of less than 12.62 g/100 in²-day.